



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/687,668	10/13/2000	Christopher J. Stakutis	0102396-00010	7984

21125 7590 01/29/2003

NUTTER MCCLENNEN & FISH LLP  
WORLD TRADE CENTER WEST  
155 SEAPORT BOULEVARD  
BOSTON, MA 02210-2604

EXAMINER

PARDO, THUY N

ART UNIT	PAPER NUMBER
----------	--------------

2175

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/687,668

Applicant(s)

STAKUTIS ET AL.

Examiner

Thuy Pardo

Art Unit

2175

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 October 2000 and 18 June 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 04, 05.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Applicant's Application filed on October 13, 2000 have been reviewed.
2. Claims 1-26 are presented for examination.

### ***Compact Disc Submission***

3. The description portion of this application contains a computer program listing in Appendices A and B consisting of more than three hundred (300) lines. In accordance with 37 CFR 1.96(c), a computer program listing printout of more than three hundred lines must be submitted as a computer program listing appendix on compact disc conforming to the standards set forth in 37 CFR 1.96(c)(2) and must be appropriately referenced in the specification (see 37 CFR 1.77(b)(4)). Accordingly, applicant is required to cancel the computer program listing in Appendices A and B appearing in the specification on pages 29-58, file a computer program listing appendix on compact disc in compliance with 37 CFR 1.96© and insert an appropriate reference to the newly added computer program listing appendix on compact disc at the beginning of the specification.

### ***Abstract***

4. Applicant is reminded that the abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the

computer tape used by the printer is limited. In this application, the abstract exceeds 150 words in length. A new abstract is required.

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-26 are rejected under the judicially created doctrine of double patenting over claims 1-39 of U. S. Patent No. 5,950,203 and claims 1-39 of U.S. Patent No. 6,161,104 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows: a data processing system for improved access to information stored on a storage device wherein the first and second nodes coupled to one another over a communication pathway and a file system, executing on the first and second nodes, being capable of responding to access requests generated by the first node, for transferring data designed by the request between the first node and the peripheral device via the second node and via the communication pathways.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-26 are rejected under 35 U.S.C. § 103 (a) as being unpatentable over **Horadan et al.** (Horadan) patent no. 5,842,211, in view of **Vahalia et al.** (Hereinafter “Vahalia”) U.S. Patent No. 6,389,420.

As to claim 1, Horadan teaches the invention substantially as claimed, comprising: a first and second nodes coupled to one another over a communication pathway [connection between computer 10 and the remote computer 11 by LAN 12 and WAN 13 of fig. 2; col. 6, lines 27-34], the second node being coupled to a peripheral device over a communication pathway [see fig.2, the communication pathway created between the storage device 33 and computer 11; col. 6, lines 66 to col. 7, lines 9], the first node being coupled to the peripheral device over another communication pathway [system bus 18 of fig. 2; col. 6, lines 49-65], a file system, executing on the first and second nodes, being capable of responding to access requests generated by the first node [financial institute file 38 of fig.2], pertaining to storage of the data designed by the request on the peripheral device [fig.3; col. 7, lines 66 to col 8, lines 12]. However, Horadan does not explicitly teach determining meta data including block address maps to file data in the storage device, and the first nodes being configured for accessing file data from the storage device using said meta data, wherein said system comprises at least one first node that caches data including meta data for a file accessed by said first node, a file application on said first node configured to get requested file data by accessing said cached data for the file, and a file notification system that sends a file change notification to said first node indicating changes affecting the cached data wherein the file application on the first node

inspects the change notification to determine whether to get the requested file data directly using said cached data, whereby file accesses may be effected for an extended time with data locally cached at first nodes of the system. Vahalia teaches determining meta data including block address maps to file data in the storage device [222 of fig. 10], and the first nodes being configured for accessing file data from the storage device using said meta data [425 of fig. 14], wherein said system comprises at least one first node that caches data including meta data for a file accessed by said first node [col. 5, lines 1-17], a file application on said first node configured to get requested file data by accessing said cached data for the file [col. 5, lines 24-35], and a file notification system that sends a file change notification to said first node indicating changes affecting the cached data wherein the file application on the first node inspects the change notification to determine whether to get the requested file data directly using said cached data [see abstract], whereby file accesses may be effected for an extended time with data locally cached at first nodes of the system [col. 5, lines 30 to col. 6, lines 7].

Therefore, it would have been obvious to one of ordinary skill in the Data Processing art at the time of the invention to have modified the communication service system of Horadan wherein the access to a shared file storage device on a network provided thereof would have incorporated the teachings of Vahalia especially the technique for caching data including metadata for a file; the motivation being to expand and enhance the versatility of Horadan's system by permitting the network clients to share access to file data in data storage [Vahalia, col. 3, lines 31-42].

As to claim 2, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file application on said first node determines whether requested file data is subject to a change notification, and if so makes a further determination whether cached data at said first node remains valid for the requested file data [see the abstract].

As to claim 3, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file application on said first node determines whether requested file data is subject to a change notification [68 of fig. 7], and applies the cached meta data to directly mount the storage device to access the requested file when the cached data is not subject to a change notification [70, 72 of fig. 7].

As to claim 4, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file application on said first node further determines whether to directly access the file data by applying cached meta data associated with the file to directly mount the storage device [35, 36 of fig. 1], or to issue a file request to the second node for valid file access meta data or data [col. 5, lines 20-25].

As to claim 5, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file notification system issues client-specific notifications limited to directories or portions of the file system that are to be accessed by each client [ab].



As to claim 6, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file notification system includes an interface layer with a storage system meta data controller for maintaining or acquiring administrative information pertaining to file size and storage locations [col. 17, lines 46 to col. 18, lines 7; col. 18, lines 65 to col. 19, lines 13].

As to claim 7, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file notification system runs on the second node and interfaces with a file system meta data controller to detect changes in file system storage data, issuing a file change notice in response thereto [col. 22, lines 37 to col. 23, lines 42].

As to claim 8, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file notification system limits number of change notifications for a given file to first n changes that occur, wherein n is a positive integer [col. 15, lines 32 to col. 16, lines 41].

As to claim 9, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file application on the first node implements a decision algorithm to determine whether to apply cached data for a requested file when the requested file is subject to a change notification [67-72 of fig. 7].

As to claim 10, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file application on the first node intercepts reads and writes, and issues those

directly to the storage device while exchanging messages over the communications pathway to permit coordinate file system management tasks performed by the second node [col. 22, lines 40-65; col. 16, lines 40-52].

As to claim 11, Horadan and Vahalia teach the invention substantially as claimed. Horadan further teaches that the file system management tasks performed by the second node include publication of change data [col. 9, lines 49-58].

As to claim 12, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the file shared access coordination system runs on the second node and interfaces with or includes a file system meta data controller interceding in response to at least a first selected file access request applied thereto by a file application on a first node, and transferring data designated by that request between the first node and the peripheral device in accord with current meta data maintained by the file system pertaining to storage of that data on the storage device such that files may be directly transferred while maintaining file coherence and security [col. 17, lines 24-45].

As to claims 13, 15-17, all limitations of these claims have been rejected in the analysis of claims 1-7, 9-12 above, and these claims are rejected on that basis.

As to claim 14, Horadan and Vahalia teach the invention substantially as claimed. Vahalia further teaches that the storage device is any of a disk drive, a "jukebox," other mass storage device or other mapped device [col. 5, lines 1-14].

As to claims 18-24 and 26, all limitations of these claims have been rejected in the analysis of claims 1-7, 9-12 above, and these claims are rejected on that basis.

8. Further references of interest are cited on Form PTO-892 which is an attachment to this office action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy Pardo, whose telephone number is (703) 305-1091. The examiner can normally be reached Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dov Popovici, can be reached at (703) 305-3830.

The fax phone number for the organization where this application or proceeding is assigned are as follows:

(703) 746-7238	(After Final Communication)
(703) 746-7239	(Official Communication)
(703) 746-7240	(For Status inquiries, draft communication)

Serial Number: 09/687,668  
Art Unit: 2175

Page 11

and/or:

*(703) 746-5616 (Use this Fax#, only after approval by Examiner, for "INFORMAL" or "Draft" communication. Examiner may request that a formal/amendment be faxed directly to them on occasions).*

Any inquiry of a general nature of relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**10. Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

(703) 308-9051, (for formal communications intended for entry)

**Or:**

(703) 308-5359, (for informal or draft communications, please label

"PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington.

VA., Sixth Floor (Receptionist).



Thuy Pardo  
January 23, 2003